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THE INSECT PEST SURVEY BULLETIN

A periodical review of entomological conditions throughout the United States,
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INSECT PEST SURVEY BULLETIN

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR JULY, 1926

The most significant entomological development that came to the attention of the Survey during the month of July was the extension of the territory known to be infested by the Anomala (*Anomala orientalis* Waterh.). In Volume II, page 64, of the Insect Pest Survey Bulletin, an account of the original discovery of this pest at New Haven is given, and a brief account of its serious development and ultimate control in Hawaii. In the current number of the Bulletin it is recorded from Jericho (L. I.), and Mt. Vernon, N. Y.

The Hessian fly is reported decidedly more abundant in west-central Ohio and the northern two-thirds of Indiana, menacing early sown wheat in this region.

The green bug appeared in serious numbers in Ohio, Indiana, Michigan, Minnesota, and South Dakota during the month. This is the first green-bug outbreak in this region since the inception of the Survey.

Because of the late season the movement of the chinch bug from small grain to corn was delayed until early July. The situation is reported as unfavorable in the Ohio River Valley westward to Nebraska and Kansas.

The corn ear worm is unusually troublesome in the region west of the Mississippi River comprising the States of Iowa, Nebraska, and Kansas. It is also reported as damaging corn in South Carolina and Mississippi.

In the Ohio River Valley the stalk borer is an outstanding pest this year in the region extending from Ohio, through Indiana and Illinois, westward to Nebraska and Iowa and southward into Missouri and Kansas.

The sugarcane beetle is reported for the first time as a serious pest of corn in Illinois. It is also doing considerable damage in Mississippi.

The alfalfa weevil has been found in Goshen County, Wyo., near the Nebraska State Line.

The codling moth is reported as more numerous than usual in Indiana and Illinois, but on the Pacific Coast it is reported as decidedly less serious.

A rather unusual infestation of apple orchards by the boxelder bug is reported from Washington State. These bugs were doing considerable damage by puncturing the fruit.

The apple seed chalcid is recorded for the first time as an apple pest in Massachusetts.

The peach twig borer is damaging 75 and 80 per cent of the fruit in some poorly sprayed orchards in California.

The cherry fruit fly is recorded for the first time from Michigan.

Several species of blister beetles are recorded over a very wide territory extending from New England southward to North Carolina and Mississippi, and westward to Minnesota and Kansas, the most serious damage being reported on potatoes.

The apple leafhopper as a potato pest is more serious than usual in Indiana and Illinois.

The pea aphid is very numerous in the cannery pea section of Maine, southward to eastern Massachusetts. It is also serious in the pea canning sections of western New York and southern Minnesota.

The boll-weevil infestation is generally light in Texas, Oklahoma, and Arkansas, and decidedly heavier in Louisiana. In Mississippi the infestation is more general than it has been during the past two years, but the intensity of infestation is lower. Eastward through Alabama and Georgia the infestation is also light.

The cotton flea or cotton hopper occasioned considerable excitement during the month in Texas, Oklahoma, Arkansas, Louisiana, Mississippi, and Alabama, extending eastward through Georgia, South Carolina, and North Carolina. In many cases cotton was seriously damaged by this pest.

The cotton leaf worm is generally prevalent over the southern part of the cotton belt and owing to the backwardness of the crop may do serious damage.

In the eastern part of the cotton belt, the boll worm is doing noticeable damage by feeding on squares, while in Louisiana and Mississippi the fall armyworm is proving troublesome.

In this number of the Survey Bulletin is a summary of the damage done to buildings by termites during the fiscal year 1926, as reported to the Bureau of Entomology.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR JULY, 1926

Wireworms, chiefly Ludius aeneipennis Kby., caused an average of 10 per cent injury to wheat over the greater part of southern Alberta. The outbreak has been increasing in severity since 1923.

Cutworms caused severe damage to field and garden crops in many sections of southern Manitoba in early summer. They have been reported as troublesome in several sections of southern Ontario.

White grubs are doing much damage to field crops in sections of southern Quebec where they have increased considerably in numbers over 1925. They have been also complained of locally in southern Ontario.

The beetle Epicauta fissilabris Lec. has appeared in outbreak form in the Vernon district and near Creston, British Columbia, destroying the foliage of Compositae and attacking potatoes, alfalfa, and wheat.

The parsnip webworm, which is common on wild parsnip on marshlands and roadsides in the Penniac Valley, New Brunswick, has infested about 60 per cent of the flower clusters of cultivated parsnip grown for seed in the Fredericton district.

The green apple aphid and the rosy aphid are scarce this year in sections of the Annapolis valley, Nova Scotia, where last year they were present in severe outbreak form.

The apple maggot is seriously infesting apples in the Acacia Valley and at Bear River, Nova Scotia.

The eye-spotted budmoth has caused considerable injury in neglected apple orchards in sections of southern Quebec and the Annapolis Valley, Nova Scotia. The oblique-banded leaf roller infested 15 per cent of apple, pear, and plum in sections of the Okanagan Valley, British Columbia, and 10 per cent of apples in Kings County, Nova Scotia. Leaf rollers have increased considerably in the Hemmingford district, Quebec, and there is a probability of a serious outbreak in 1927.

The plum curculio has been responsible for serious damage to apples in sections of southern Quebec.

The strawberry root weevil, Brachyrhinus ovatus L., is becoming a serious pest at Armstrong, British Columbia. The strawberry weevil, Anthonomus signatus Say, has been causing damage in sections of Nova Scotia and southern Quebec.

The aphid Myzaphis abietina Walker was found infesting 80 per cent of the tideland Sitka spruce on Queen Charlotte Islands; at Alert Bay, Vancouver Island, and on the mainland of British Columbia, near Prince Rupert, during May. The injury, which resulted in the defoliation of affected trees, was confined to old needles, the needles of 1925 and the terminals of 1926 being unaffected.

The European beech bark louse, Cryptococcus fagi Baer., occurs on beech over the greater part of the mainland of Nova Scotia. It has not yet been found in Cape Breton Island or New Brunswick.

There is a heavy infestation of the larch case-bearer and larch sawfly all over New Brunswick and on Cape Breton Island. The larch sawfly was responsible for a 10 per cent defoliation of larches between North Bay and Sturgeon Falls, Ontario.

The spruce budworm is present in outbreak form in southern Cape Breton Island and in Sudbury County, Ontario. Outbreaks reported in the past, in sections of British Columbia, appear to have completely died out.

The European household mosquito, Culex pipiens L., is developing in great numbers in a considerable acreage of rush-grown sewage-contaminated swamp on the outskirts of Montreal, Que.

GENERAL FEEDERS

THE ANOMALA (Anomala orientalis Waterh.)

New York E. P. Felt (July 29): A considerable though probably limited infestation has been found recently at Jericho, L. I., and another area, undetermined at present, at Mt. Vernon, Westchester County. The beetles occur rather commonly in roses, particularly older white roses, and are usually clustered at the base of the flower among the recurved petals and sepals.

GRASSHOPPERS (Acridiidae)

Indiana J. J. Davis (July 26): Grasshoppers have been abundant in some clover fields. Reports of damage to flower and vegetable gardens came from New Ross and Milford on July 20 and 21.

Nebraska M. H. Swenk (July 25): During late June and July the area in which important injuries by grasshoppers (Melanoplus sp.) was taking place in the alfalfa and corn fields expanded from western Buffalo County to include all of Dawson County, and from Nuckolls County it extended west to Franklin County.

Utah G. F. Knowlton (July 30): Grasshoppers were damaging alfalfa at Trout Creek, but sodium arsenite bait cleared up the outbreak.

California T. D. Urbahns (June 25): Melanoplus differentialis Thos. was reported attacking cotton fields adjoining alfalfa and causing severe injury along the edges. In a few cases 10-acre patches were a complete loss. In about 300 acres of alfalfa in which the growers did not practice control measures the hay crop was completely destroyed.

WIREWORMS (Elateridae)

New York E. P. Felt (July 29): A number of wheat wireworms, Agriotes mancus Say, were received the very last of June from Greenwich, Washington County, where they were causing injury to young plants.

C. R. Crosby and assistants: In Ontario County, cabbage set out in the field on June 19 has been injured moderately by Agriotes mancus, as observed in three instances. The adult beetles of Melanotus communis Gyll. have seriously defoliated one young orchard at Peru.

Indiana J. J. Davis (July 26): Wireworms were reported damaging corn at Jeffersonville on July 1, at North Manchester on July 2, and at Spiceland on July 13.

Kansas J. W. McColloch (June 24): Wireworms destroyed 10 acres of corn at Lincoln and caused some damage to corn at Lawrence.

Nebraska

M. H. Swenk (July 25): From Butler County, under date of June 26, came another report of injury to corn by wireworms of the species Melanotus fissilis Say. This field was of listed corn, on low, heavy black soil. About the middle of June the wireworms started boring in the base of the stalks and cutting off the plants a little below the surface level of the ground so that by June 26 the corn had been killed out in large patches and there were from two to four of the wireworms in each corn-stalk.

CEREAL AND FORAGE-CROP INSECTS

WHEAT AND OATS

Hessian Fly (Phytophaga destructor Say)

Pennsylvania &
New York

C. C. Hill (August 2): Recent surveys by T. J. Blisard and the writer, in eastern Pennsylvania, and H. D. Smith in certain sections of the State of New York show very light Hessian fly infestation. The infestation in New York State extended into the spring wheat sections of Jefferson County.

Ohio

E. W. Mendenhall (July 12): I find the Hessian fly infestation to be 34.6 per cent in Darke County. The infestation is worse where the fly-free date was not observed.

Indiana

J. J. Davis (July 26): Indications reach us from all parts of the northern two-thirds of the State of an abundance of the Hessian fly and probabilities of a heavy infestation this fall.

Nebraska

M. H. Swenk (July 25): The Hessian fly did practically no commercial damage to the Nebraska winter wheat crop of 1925-26. The only complaint of any loss whatever to be received at this office came from central York County, and this indicated that the damage was but slight.

WHEAT STRAW WORM (Harmolita grandis Riley)

New York

H. D. Smith (August 2): A general infestation of Harmolita grandis was found in various sections of New York State. It occurred in considerable abundance in Wayne and nearby counties and was found in lesser abundance in the spring wheat regions of Oswego and Jefferson Counties.

WHEAT STEM SAWFLY (Cephus pygmaeus L.)

Pennsylvania &
New York

H. D. Smith (August 2): A recent survey by the writer in the State of New York shows the wheat stem sawfly to be very abundant and extending throughout the wheat growing sections from northern Pennsylvania to as far north as Oswego County. In Oswego and Jefferson Counties scarcely any infestation was found.

WHEAT STEM MAGGOT (Meromyza americana Fitch)

Indiana J. J. Davis (July 26): The wheat stem maggot was received on June 28 from Greenfield, where it was reported damaging wheat.

GREEN BUG (Toxoptera graminum Rond.)

Ohio E. W. Mendenhall (July 12): I find some infestation by the spring grain aphid in western Ohio but the insect is not doing any serious damage to wheat.

Indiana J. J. Davis (July 26): Toxoptera graminum Rond. was abundant on oats at Anderson and Argos, on July 18 and 19, respectively, and apparently doing some damage.

Michigan R. H. Pettit (July 9): Samples of oats infested by Toxoptera graminum Rond. were received from Crystal Falls, Iron County, away up near Lake Superior. This, I believe, is the first record for the Upper Peninsula. The specimens were determined by Prof. E. I. McDaniel who had experience with the creature formerly in Kansas. A field of 20-acres of oats is reported to be entirely destroyed, and the bugs are said to be beginning on other fields. The weather has been cold and wet, I believe, although it has recently turned warm according to the word of Earl Roberts, county agent of Iron County, who sends in the specimens. (July 17): I have also received today from Empire, Michigan, in Leelanau County, samples of Toxoptera graminum in oats.

Minnesota C. E. Mickel (July 15): The outbreak of the green bug continues unabated and has spread north, south, east, and west in the State until it has reached the Iowa line on the south, the Wisconsin line on the east, Duluth and Bemidji on the north, and the South Dakota line on the west.

C. N. Ainslie (July 16): This species, always present in the Middle West in small numbers, has increased to the importance of a scourge in south-central Minnesota this summer. Small grain is now too old for their food and nearly all have gone north. Thousands of acres of wheat and oats have been practically destroyed in 13 counties in Minnesota, the dry weather aiding in the injury. A few fields in northwestern Iowa also show signs of green-bug damage.

South Dakota H. C. Severin (June 8): The green bug is becoming abundant on oats and wheat and is beginning to do some damage. Parasites are still scarce and so also are predacious enemies.

ENGLISH GRAIN APHID (Macrosiphum granarium Kirby)

Illinois W. P. Flint (July 20): This aphid has been very abundant in oat fields in the north-central and northern parts of the State during the last two weeks. Considerable damage to oats has occurred in several counties in this section, Urbana. At the

present time parasites are becoming abundant in the heavily infested fields, and the aphids are fast disappearing.

SMUT BEETLE (Phalacrus politus Melsh.)

Nebraska M. H. Swenk (July 25): During the last few days in June and the first week in July the smut beetle, Phalacrus politus, was reported as exceedingly numerous in badly smutted wheat fields in Dawes and Morrill Counties.

CORN

CHINCH BUG (Blissus leucopterus Say)

Florida J. R. Watson (July 30): The chinch bugs have been quite destructive at Gainesville to St. Augustine grass lawns as usual at this season of the year.

Ohio E. W. Mendenhall (July 12): The chinch bug is doing some damage in Darke County. Some methods will have to be resorted to in order to protect the cornfields.

Indiana J. J. Davis (July 26): The chinch bug has shown up in spotted areas and the first report did not come in until July 19, which was unusually late. Reports of damage have come from Union City, Kentland, Portland, Montmorenci, and Linton.

Illinois W. P. Flint (July 20): The expected outbreaks of the chinch bug throughout south-central and central Illinois have occurred at the time of small-grain harvest. The area where serious infestation has occurred is limited to counties in the southwest central part of the State, and one or two counties in the central area. The damage is spotted, but quite severe in some cases. The combined creosote and calcium cyanide barriers have given very good control. Present weather conditions are very favorable to the chinch bug.

Nebraska M. H. Swenk (July 25): The chinch bug, which began its movement from the wheat and other small grains into the corn in southeastern Nebraska from June 18 to 20, as reported last month, reached the maximum of this migration from June 25 to July 6, and the migration was practically over throughout the State by July 11. The pest caused more or less serious losses to corn in 16 counties of southeastern Nebraska.

Missouri L. Haseman (July 23): With the early spring dry spell the chinch bug bred abundantly and proved a real problem in a number of the central counties following wheat harvest. The migration of the very young bugs from wheat stubble to corn resulted in considerable damage to corn, and if the summer and fall should prove particularly dry I suspect that the second brood would do still further damage to the crop.

Kansas E. W. McColloch (July 17): The chinch-bug situation is still bad

in northeastern Kansas. Dry weather has been favorable to the insect. The second brood is now hatching in large numbers in corn and sorghum fields.

Mississippi R. W. Harned (July 15): During the last few days in June and the first few days in July, complaints in regard to the chinch bug on corn were received at this office from Benton, Copiah, and Yalobusha Counties.

CORN EAR WORM (Heliothis obsoleta Fab.)

South Carolina J. O. Pepper (July 8): The larvae of this insect have migrated from alfalfa fields to near-by cornfields and are seriously injuring the young corn in Oconee County, attacking both the stalks and the buds.

Iowa C. N. Ainslie (July 16): The larvae are attacking growing corn at Sioux City, eating out the throat of the stalks and killing the growing tip, especially in sweet corn. At this date the larvae are about half grown.

Nebraska M. H. Swenk (July 25): The common corn ear worm caused considerable alarm, as well as local injury, by starting in at the top of the corn plants and working down in the center of the stalks, devouring the developing tassel, during the period from July 7 to 15, inclusive. The younger stages of this insect were in several instances thought by farmers to be the European corn borer. Complaints of this sort came from Douglas, Sarpy, northeastern Gage, and northern Webster Counties.

Kansas J. W. McColloch (July 17): The corn ear worm is extremely abundant this year over the entire State. Every ear of sweet corn has at least one larva in it. The injury to the curl and tassels of field corn has been outstanding. Approximately 25 per cent of the plants in Riley County show severe rag-worm damage. Reports from all sections of the State indicate that this condition is general. (July 31) The corn ear worm continues extremely abundant in the State. Practically every ear of sweet corn going on the market in Riley County is infested. Field corn is just coming into the ear and the worms are already abundant on the developing ears.

Mississippi R. W. Harned (July 15): Considerable injury to corn by the corn ear worm, Heliothis obsoleta, was reported from Columbia, Marion County, on July 10.

LARGER CORN STALK BORER (Diatraea zeacolella Dyar)

North Carolina R. W. Leiby (June 29): More than the average number of complaints of injury by this insect are being received. The dry season may have made injuries to corn more pronounced.

STALK BORER (Papaipema nitela Guen.)

Massachusetts A. I. Bourne (July 24): We received our first specimens of

Papaipema nitea larvae, about one-third grown, collected in this vicinity (Amherst). Since that time we have occasionally had the pest reported. We do not think that it has been as abundant as usual.

- Ohio E. W. Mendenhall (July 12): The common stalk borer has been quite prevalent this year, and often taken for the European corn borer. Attacking various plants in southwestern Ohio, and doing some damage.
- Indiana J. J. Davis (July 26): The common stalk borer was the outstanding pest. Reports showed corn to be the predominant host although quite a few reports of damage to tomato and occasional ones of damage to potato, onion, beans, hollyhock, and sour dock. These letters have come in during the month from June 28, the date of our June report, to July 26.
- Illinois W. P. Flint (July 20): A very large number of specimens of this insect have been sent in during the past month. Most of the injury reported has been to corn and oats. Other plants reported infested have been pepper, delphinium, tomatoes, potatoes, and beans. The larvae are about one-half grown in the central part of the State at this time. It is probable that the insect is only normally abundant in the State, but more people are now on the lookout for insects boring in corn.
- Nebraska M. H. Swenk: The outbreak of the common stalk borer became the outstanding insect complaint, next to the chinch-bug troubles, during the period covered by this report, June 25-July 25. Between June 5 and July 3 reports were received from practically all of the eastern Nebraska Counties south of the Platte River east of Saline County, and also from Sarpy, Douglas, and Dodge Counties, lying north of the Platte. From July 11 to 19 reports of similar injury were received from Cuming, Thurston, Dixon, and other northeastern Nebraska counties, where in some fields the damage continued to be fairly extensive and serious. Complaints abruptly ceased about July 20.
- Iowa C. N. Ainslie (July 16): Larvae of various sizes and ages are found in stalks of sweet and field corn, doing marked injury in some fields in Sioux City.
- Minnesota C. E. Mickel (July 15): Many reports are being received regarding the injury of the stalk borer at St. Paul. Reports of injury to rhubarb, corn, and potatoes are the most numerous.
- Missouri L. Haseman (July 23): This caterpillar has continued to attract attention in corn and garden crops throughout the month at Columbia.
- Kansas J. W. McColloch (July 15): Corn plants infested with the larvae of the stalk borer have been received from Hiawatha on July 2, and Lawrence on July 15. (July 31): Samples of corn injured by the

stalk borer have been received from Lawrence on July 16, McCune on July 21, and Stillwell on July 23.

ARMYWORM (Cirphis unipuncta Haw.)

Minnesota C. E. Mickel (July 15): Several local outbreaks of armyworms have appeared at St. Paul but they are very local in nature and in all cases the worms have been heavily parasitized.

WESTERN ARMYWORM (Chorizagrotis auxiliaris Grote)

Minnesota C. E. Mickel (July 15): During the latter part of May and the first half of June there was a very heavy flight of western army cutworm moths in the western part of the State. The flight extended to the eastern part of the State, although the numbers of moths in the latter section was much less than in the west.

STRIPED CORN BORER (Hadena fractilinea Grote)

New York E. P. Felt (July 29): Larvae were received in early July from Schoharie County, accompanied by the statement that the insect was causing quite serious damage to fields of ensilage corn.

C. R. Crosby and assistants: Two fields of corn were partially destroyed at West Valley by this insect.

BLACK CUTWORM (Agrotis ypsilon Rott.)

Illinois W. P. Flint (July 20): The most abundant cutworm occurring in the State this year has been the greasy cutworm, Agrotis ypsilon. This species has caused damage on lowlands, or areas that had been partly overflowed earlier in the spring. It has been received in large cornstalks, where it was boring in the stalk in somewhat the same manner as the larvae of the common stalk borer, although the entrance hole was very much larger.

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli Guen.)

Kansas J. W. McColloch (July 1): This cutworm has caused damage to corn at Fort Scott and Iola.

GARDEN WEBWORM (Loxostege similalis Guen.)

Missouri L. Haseman (July 23): For the past week the garden webworm has been attracting special attention in the southeastern counties of the State where corn and cotton are being damaged extensively. Here, in central Missouri, this caterpillar is also very abundant in places though it is confining its work quite largely to pigweeds and other uncultivated plants.

Kansas J. W. McColloch (July 1): The following reports have been received: On June 21, this insect destroyed 10 acres of corn at Eureka; June 23, a field of 14 acres was ruined at Burlingame; June 26, 8 acres

infested at Paola; June 26, considerable injury reported to corn in Bourbon County.

BILLEUGS (Sphenophorus spp.)

Indiana J. J. Davis (July 26): Billbugs have been reported from Jeffersonville on this date, this being old injury to corn. Billbug larvae were abundant on July 19 in timothy bulbs at Winamac.

MAIZE BILLBUG (Sphenophorus maidis Chitt.)

Kansas J. W. McCulloch (June 26): A field of corn at McPherson has been seriously damaged by this insect.

GRAPE COLASPIS (Colaspis brunnea Fab.)

Illinois W. P. Flint (July 20): Reports of damage by the grubs of this species continued to be received during the latter part of June and the first of July. A survey made by J. H. Bigger in several counties of western Illinois showed that the larvae had caused the greatest amount of damage on spring-broken red-clover sod. Fall plowed red-clover sod was injured in a few cases, but not so severely as spring-broken sod. Injury is also reported where corn had followed corn, and where corn had followed mixtures of timothy and clover; also in a few cases to corn following soybeans. Corn on sweet-clover sod was nearly, or quite, free from injury. The adult insects are now very abundant in fields of soybeans, and are causing some damage by their feeding on the soybean leaves.

SUGARCANE BEETLE (Eutheola rugiceps Lec.)

Illinois W. P. Flint (July 30): Reported doing damage in a small area in southern Illinois. The damage all occurred to corn, and was typical of the damage by this insect in the South. This is the first time that this insect has been reported doing damage in Illinois. Identification of the species was made by Dr. T. H. Frison of the Natural History Survey.

Mississippi R. W. Harned (July 15): Two rather serious complaints in regard to injury by the rough-headed corn stalk beetle, or sugarcane beetle, were received during the early part of July. One sugarcane grower in Lauderdale County reported that 40 per cent of his sugarcane had been damaged by this beetle. Another grower in Copiah County stated that a field of corn had been destroyed by this insect.

PRIONUS GRUBS

Nebraska M. H. Swenk (July 25): During the second week in July a remarkable instance came to our notice, where a Greeley County cornfield, planted on native prairie sod broken this spring about the last of March, disked six times and planted to corn about May 10, was practically destroyed between the middle of June and July 8 by Prionus grubs boring up into the cornstalks and killing them.

CORN ROOT WORM (Diabrotica longicornis Say)

Nebraska M. H. Swenk (July 25): Complaints of serious injury in cornfields by the western corn root worm, Diabrotica longicornis, were received, between the middle of July and the period of forwarding this report (July 24), from Cass, Gage, and Hitchcock Counties.

CORN LEAF APHID (Aphis maidis Fitch)

Indiana J. J. Davis (July 26): Aphis maidis was very abundant and apparently destructive to sorghum at Columbus on July 21.

Kansas J. W. McColloch (July 15): This insect is very abundant in corn and sorghum fields in Riley County. Practically every sorghum plant is infested and about 25 per cent of the corn tassels are heavily infested.

CORN ROOT APHID (Anuraphis maidi-radicis Forbes)

Nebraska M. H. Swenk (July 25): The corn root aphid continued to be reported as injuring cornfields during late June and early July. The most serious reports came from Greeley and Dawson Counties.

Kansas J. W. McColloch (July 5): A 50-acre field is heavily infested with this aphid and the attendant ants.

ALFALFA

CORN EAR WORM (Heliothis obsoleta Fab.)

South Carolina J. O. Pepper (July 2): The alfalfa fields in Oconee County are heavily infested by this insect, which is causing much damage.

CLOVER LEAF WEEVIL (Hypera punctata Fab.)

South Carolina J. O. Pepper (July 7): Many adults of this insect can be found in the alfalfa fields throughout Oconee County.

ALFALFA WEEVIL (Phytonomus posticus Gyll.)

Nebraska Don B. Whelan (July 24): In view of the fact that a new infestation of the alfalfa weevil has been found near the Nebraska line at Torrington, Goshen County, Wyo., it might be well to make known that in June I made a survey of the North Platte Valley in Scotts Bluff County, Nebr., for this pest. Beginning at the Wyoming-Nebraska line, alfalfa fields, both north and south of Henry, were examined east to Minatare. Sweepings were made and new haystacks were examined without any trace of this pest being found.

GRASS

FALL ARMYWORM (Laphygma frugiperda S. & A.)

Florida J. R. Watson (July 30): The fall armyworm has been quite generally troublesome at Gainesville especially to Bermuda grass on lawns and golf courses.

F R U I T I N S E C T S

APPLE

APPLE APHID (Aphis pomi DeG.)

New York C. R. Crosby and assistants: Young orchards in Orange County are showing quite an infestation of this insect. This pest is now abundant in young apple plantings in Ulster County and in several older bearing orchards was abundant on terminals and suckers.

ROSY APPLE APHID (Anuraphis roseus Baker)

Massachusetts A. I. Bourne (July 24): Mr. Whitcomb reports rosy apple aphids in Middlesex County to be present in some orchards in numbers enough to cause some serious curling, particularly on top-worked trees.

New York C. R. Crosby and assistants: In Columbia County rosy apple aphid colonies can easily be found although there is little commercial damage. A few colonies of rosy apple aphids in Monroe County are showing up but in no instance has this condition appeared at all serious. In Chautauqua County a few leaves can be found here and there curled by this aphid but they are rapidly changing to the winged form, so that very little actual injury has or should be done. A few colonies of this insect can be found in Orleans County but in no case is the number sufficient to cause appreciable injury.

CODLING MOTH (Carpocapsa pomonella L.)

Indiana Bennet A. Porter (July 24): The first moths of the second brood emerged at Vincennes July 2; first eggs hatched about July 10; the hatching of second-brood worms in large numbers is now occurring. Codling moth infestation is very heavy in many orchards in southern Indiana.

Illinois W. P. Flint (July 20): The first adult of the second brood of the codling moth emerged at Carbondale, in southern Illinois, on July 1. It is possible that adults were out a few days earlier in the orchards. Emergence occurred at Urbana on July 7. A heavy emergence of adults is taking place at this time in the central part of the State. The insect is more abundant this year than usual in many localities.

Michigan R. H. Pettit (July 2): The codling moth is much later than usual. Even in the southern part of the State the worms are still very

small and the first generation is just nicely getting started.

California T. D. Urbahns (July 17): The infestation might be considered light except in neglected orchards in Watsonville. Many growers will omit spraying for the second brood, which is now appearing.

Washington E. J. Newcomer (July 11): Owing to the cool weather of May and June, the codling moth is not as numerous in Washington as usual, and the fruit is generally freer of worms at this date than it has been for several years. Second-brood worms began hatching July 11.

The parasite Ascogaster carpocapsae Vier. is being recovered in larger numbers than in previous years. Of the worms collected from banded trees, 27.5 per cent have been parasitized, whereas formerly only about 15 per cent have been parasitized.

FALL CANKERWORM (Alsophila pometaria Harr.)

Maine J. V. Schaffner Jr. (June 28): Several orchards and elm trees have been from 50 to 75 per cent defoliated at Kennebunkport (along the highway).

New York C. R. Crosby and assistants: In Wayne County half a dozen more or less neglected orchards were seriously defoliated in the southern part of the county.

SPRING CANKERWORM (Paleacrita vernata Peck)

New York C. R. Crosby and assistants: In Wayne County half a dozen more or less neglected orchards were seriously defoliated in the southern part of the county.

LEAF CRUMPLER (Mineola indigenella Zell.)

Mississippi R. W. Harned (July 15): Specimens of the apple leaf-crumpler on apple were received from Pascagoula in Jackson County and Sallis in Attala County on June 26.

UNICORN CATERPILLAR (Schizura unicornis S. & A.)

Indiana J. J. Davis (July 26): Caterpillars were abundant and defoliating young apple orchards at Greencastle July 15.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Massachusetts A. I. Bourne (July 24): Mr. Whitcomb reports that in Middlesex County the apple-maggot flies began appearing in considerable abundance on or about July 16, which would be the approximate date for this section, also, of their appearance in any considerable abundance.

Michigan R. H. Pettit (July 2): Adults of the apple maggot were out and have been out for a few days in this section (East Lansing) of the State.

APPLE RED BUG (Heterocordylus malinus Reut.)

New York

C. R. Crosby and assistants: In several orchards in Yates County where this insect has never been a problem in past years a large amount of the fruit was injured this season. Other orchards show a moderate infestation. In Greene County many fruits have been rendered unmarketable in some orchards from damage by this insect.

FALSE APPLE RED BUG, (Lygidea mendax Reut.)

New York

C. R. Crosby and assistants: In several orchards in Yates County where this insect has never been a problem in past years a large amount of the fruit was injured this season. Other orchards show a moderate infestation. In Greene County many fruits have been rendered unmarketable in some orchards from damage by this insect.

BOXELDER BUG (Leptocoris trivittatus Say)

Washington

R. L. Webster (July 6): Reported as "sucking the juice out of all our apples" at Berrian. They are thickest on the Red June. Many trees have them so thick on the apples that they look like bee swarms. (July 7): Reported as puncturing Red June and Delicious apples in Benton County.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Indiana

Bennet A. Porter (July 24): No second-brood crawlers have been found yet, but indications are that they will appear within a day or two. Infestations of the San Jose scale are comparatively light so far this season.

APPLE SEED CHALCID (Syntomaspis druparum Boh.)

Massachusetts

A. I. Bourne (July 24): Early in July, on the 8th, our attention was called here in the College orchards to the crab apples and lady apples which were being stung by some wasplike insect. Specimens were collected and sent to Washington for definite determination. Reports confirmed our suspicion that this was the apple seed chalcid. On the trees where these insects were found, which was in the variety block, a very large percentage of the crab and lady apples show the characteristic injury by this insect. This, as far as I can ascertain, is the first time that we have collected this particular species, at least in any abundance in this State.

PEAR

PEAR SLUG (Eriocampoides limacina Retz.)

Utah

A. C. Burrill (July 4): In Logan, Cache County, pear slugs were attacking cherry trees and one Bartlett pear, which were

all turning brown. Larvae are now leaving trees. Abundance as compared with that in an average year seems to be greater. Over one-fourth of the leaves have been ruined.

PEAR MIDGE (Contarinia pyrivora Riley)

New York C. R. Crosby and assistants: In an orchard in Orange County, near Snake Hill, the injury was extremely serious this season. The Bosc variety was almost completely destroyed. Clapps Favorite, however, were only slightly injured while Seckels and Bartletts in the same orchards were apparently untouched.

PEAR LEAF BLISTER MITE (Eriophyes pyri Pgst.)

Utah G. F. Knowlton (July 30): Blister mite is damaging some apple orchards around Fruita, Loa, and other southern Utah towns, where the trees have not been sprayed for this pest for several years.

PEACHES

RHINOCEROS BEETLE (Dynastes tityus L.)

Indiana J. J. Davis (July 26): Specimens of the rhinoceros beetle were received from Salem on July 19 with the report that they were damaging ripening peaches.

FRUIT TREE FULVINARIA (Fulvinaria amygdali Ckll.)

New York C. R. Crosby and assistants: Early this spring growers in the area infested by this pest applied lubricating-oil emulsions as a control measure. In general the results were rather satisfactory. From observations made in Wayne, Monroe, and Orleans Counties some orchards still have a slight infestation, especially where poor spraying was practiced or too dilute oils were applied. It is feared that the infestation left will seriously smut up the fruit unless summer applications against the hatching forms are applied. The first eggs hatched about July 3.

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck)

Georgia Oliver I. Snapp and assistants (July 21): Third-generation moths are now emerging at Fort Valley and Macon. The insect is nearly one full generation behind last year at this date. The infestation at these points is very light. The pest is of no economic importance here now.

PEACH TWIG BORER (Anarsia lineatella Zell.)

California T. D. Urbahns (July 15): This species is causing the loss of many canning peaches. Some orchards, where spring spraying was delayed by rains, show 75 or 80 per cent of the fruit infested in Sutter County, whereas in other sections the infestation is as low as 2 or 3 per cent.

PEACH BORER (Aegeria exitiosa Say)

- Georgia Oliver I. Snapp (July 21): Indications point to the heavy use of paradichlorobenzene in the Peach Belt at Fort Valley this fall. Peach-borer infestations are fairly heavy in orchards where the treatment was omitted last year.
- Indiana J. J. Davis (July 26): The peach tree borer is probably more abundant than usual this year at La Fayette.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

- Indiana J. J. Davis (July 26): A number of reports of the shot-hole borer attacking peach and cherry have come from the southern half of the State. The reports have come from points as far north as Portland. Probably it is no more than normally abundant.
- Michigan R. H. Pettit (July 9): G. L. Gentner of this department has just returned from a trip to Ludington to look into a case of great injury done by Scolytus rugulosus in cherry trees. The peculiar thing about it is that the damage is altogether due to feeding punctures in the twigs. The twigs are many of them killed and large masses of gum were thickly scattered throughout their lengths. I could not make out how the thing could have happened by correspondence and I therefore asked Mr. Gentner to visit the place. He records 50 or 60 cords of apple and cherry wood from which the beetles have recently emerged, this firewood lying alongside the cherry orchard. The trees in the vicinity of the wood were more seriously attacked than those at a distance. Mr. Gentner reports that a number of trees will undoubtedly die from the feeding punctures alone. The trees were in such vigorous condition that no breeding galleries were found.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

- Massachusetts A. I. Bourne (July 24): The plum curculio is showing up in considerable abundance and as near as can be estimated at this time will be fully as bad as for the last few years.
- Georgia Oliver I. Snapp (July 21): The Georgia peach crop of nearly 13,000 cars has moved without a single complaint of curculio damage. The infestation is extremely light. Wormy peaches have been scarce this season, and the insect is apparently under excellent control.

CHERRY FRUIT FLY (Rhagoletis cingulata Loew)

- New York C. R. Crosby and assistants: In Ulster County practically all orchards examined are free of this pest. In some orchards in Columbia County the adult flies are rather commonly found.

Michigan

R. H. Pettit (July 2): Cages set for the cherry fruit fly at Traverse City show that on last Sunday, the 27th of June, 50 flies were observed, and an examination on the 26th had showed no flies at all. Owing to a hole in the cage, the flies all escaped and I have not seen any of them. It is unreasonable, however, to suspect that it may have been one of the cherry fruit flies. This morning I received from Hart, which is a little south of Traverse City, five white-banded adults of Rhagoletis cingulata gotton by one of our field men sweeping the trees. This is, of course, authentic, and the first authentic record for the State. There were four males and one female.

FRUNES

RED SPIDER (Tetranychus telarius L.)

California

T. D. Urbahns (July 19): The hot weather is apparently favoring the development of the red spider at the present time but general infestations are much lighter than they have been for four or five years in the Sacramento and San Joaquin Valleys.

EIGHT-SPOTTED FORESTER (Alypia octomaculata Fab.)

Massachusetts

J. V. Schaffner, Jr. (July 7): This species is abundant on grape throughout the Italian section of Revere. Undoubtedly spraying will be necessary to protect the crop.

Minnesota

C. E. Mickel (July 15): The eight-spotted forester has been very abundant on vines at St. Paul and reports of injury to vines on houses are constantly being received.

GRAPE ROOT WORM (Fidia viticida Walsh)

Kansas

J. W. McColloch (June 23): This insect is said to be destroying 1,800 vines in a vineyard near Atchison.

ROSE CHAFER (Macrodactylus subspinosus Fab.)

Massachusetts

A. I. Bourne (July 24): The first specimens of rose chafers appeared in this vicinity (Amherst) on June 26 and 27. From our observations and from reports which have come in, they are apparently of normal abundance.

New York

C. R. Crosby and assistants: In Dutchess County a slight but not serious infestation is present in most vineyards. Slight damage was noted in a large number of localities in Wayne County; cherries, apples, and other fruits are being attacked.

Nebraska

M. H. Swenk (July 25): The outbreak of the rose chafer mentioned in my last report ceased abruptly about June 26.

GRAPE FLEA BEETLE (Haltica chalybea Illiger)

New Mexico J. R. Douglas (July 15): The grapevine flea beetle has been causing considerable trouble to the young grapevines in the Rio Grande Valley near Albuquerque.

BLUEBERRY

BLACK-LINED CUTWORM (Agrotis fennica Tausch.)

Maine C. R. Phipps (July 19): This cutworm, abundant and destructive last season, was taken in only two localities this year. A few larvae were taken in Cumberland County early in May. About a month later (June 7) larvae appeared in some abundance on Long Island in Hancock County.

BLUEBERRY FLEA BEETLE (Haltica torquata Lec.)

Maine C. R. Phipps (July 19): Larvae of the blueberry flea beetle were noticeably injurious and abundant early in June in Hancock County. The adults appeared about July 14.

BLACK-HEADED FIREWORM (Rhopobota naevana Hbn.)

Massachusetts A. I. Bourne (July 24): Mr. Lacroix reports that very few complaints of any serious injury from the black-headed fireworm have as yet been received.

PECAN

PECAN NUT CASE BEARER (Acrobasis hebescella Hulst)

Florida J. C. Goodwin: The nut case bearer is extremely destructive this season at Monticello. In some orchards the loss ranges from 25 to 60 per cent of the crop.

FALL WEBWORM (Hyphantria cunea Drury)

Georgia Oliver I. Snapp (July 19): The fall webworm has just begun to make its appearance here at Fort Valley.

Mississippi R. W. Harned (July 15): The only complaint received recently in regard to the fall webworm was from Sibley in Adams County on June 29; pecan trees were infested.

ALMOND

ELM LEAF BEETLE (Galerucella xanthomala Schr.)

California T. D. Urbahns (June 25): On a ranch at Hanford where about eight large elm trees were completely defoliated the adult beetles attacked and completely defoliated adjoining almond trees.

CITRUS AND SUBTROPICAL INSECTS

CITRUS MEALYBUG (Pseudococcus citri Risso)

Florida J. R. Watson (July 30): Mealybugs have been unusually troublesome in citrus groves, but are now being controlled by a fungus disease.

CITRUS RUST MITE (Eriophyes oleivorus Ashm.)

Florida J. R. Watson (July 30): Rust mites at Gainesville have this year continued later into the rainy season than is usual, but are controlled by their fungus disease.

SPIRAEA APHID (Aphis spiraeicola Patch)

Florida J. R. Watson (July 30): Heavy rains and high temperatures have reduced the numbers of citrus aphid (Aphis spiraeicola) to a minimum. This has been accomplished in three ways: The high temperature retards both development and reproduction of the aphids, the heavy rains wash a large portion of the aphids from the trees and dash them to death on the ground, and the high humidity has caused a large epidemic of fungus diseases, particularly Empusa.

TRUCK - CROP INSECTS

MISCELLANEOUS FEEDERS

PAINTED LADY (Vanessa cardui L.)

Indiana J. J. Davis (July 26): The thistle caterpillar has been scattered. Only one report of this insect attacking cultivated crops, namely, hollyhocks at Portland on July 1.

Illinois W. P. Flint (July 20): The larvae of this insect have been nearly as abundant as in 1924. The percentage of parasitism at this time is not as high as that in 1924. About 10 to 20 per cent of the larvae are maturing in central Illinois. A few larvae have been found feeding on soybeans.

Minnesota C. E. Mickel (July 15): The thistle butterfly, Vanessa cardui, is extremely abundant. In certain parts of the State it is reported that they have entirely consumed Canada thistle in some places. Their numbers have been so great in other places that they have been properly called army worms. They have also been working on the sow thistle.

POTATO AND TOMATO

BLISTER BEETLES (Meloidae)

Connecticut W. E. Britton (July 27): Epicauta pennsylvanica DeG. is reported attacking Swiss chard at New Haven on this date. (July 28): Epicauta

marginata Fab. was attacking tomatoes at Wethersfield on July 28.

- Maryland E. N. Cory (July 8): Crop made; no damage but considerable stripping of the foliage at Glenarm by Macrobasis flavocinereus Blatch.
- North Carolina R. W. Leiby (June 29): Macrobasis unicolor Kby. appears to be rather destructive to Irish potato vines in the western part of the State, at least correspondents' complaints would so indicate.
- Indiana J. J. Davis (July 26): The striped blister beetle, Epicauta vittata Fab., damaged tomatoes at Romney on July 22. The black blister beetle, Epicauta pennsylvanica, damaged tomatoes at Pendleton on July 22.
- Nebraska M. H. Swenk (July 25): There was an outbreak of the gray blister beetle, Epicauta cinerea Forst., during the fortnight between June 30 and July 14, in Nuckolls, Webster, Franklin, and Harlan Counties. This species was accompanied also by an abundance of the large brown blister beetle (Macrobasis immaculata Say). The pests injured especially potatoes, tomatoes, beans, and other garden truck, in many cases stripping the plants.
- Kansas J. W. McColloch (July 15): Blister beetles have been especially bad on potatoes during the last two weeks at the following places: Glen Elden, Woodston, Selden, Osborne, Mound Ridge, Victoria Vine, Salina, Stockton, and Hill City. (July 31); The blister beetles have continued to be a serious pest in gardens throughout a number of north-central counties. During the past week reports have been received from Paradise, Plainville, Vesper, Penokee, Bloom, Hays and Caldwell. In most cases the injury was most severe on potatoes and tomatoes.
- Mississippi R. W. Harned (July 15): Blister beetles belonging to the species Macrobasis unicolor Kby. and Epicauta lemniscata Fab. were reported as causing serious damage to soybeans at Dennis on July 5. Specimens of Epicauta lemniscata collected on Irish potatoes were received from Furvis on June 30.

EASTERN LUBBER GRASSHOPPER (Romalea microptera Beau.)

- Mississippi R. W. Harned (July 15): The southern lubber locust was reported as causing serious damage to cantaloupes, grapes, corn, and other crops at Gulfport on July 6.

STRIPED FLEA BEETLE (Phyllotreta vittata Fab.)

- Alabama L. W. Brannon (July 9): This flea beetle is doing severe damage to young mustard, turnips, and collards at Birmingham. Growers in this section are plowing greens up because the injury is so severe.

SUCKFLY (Dicyphus minimus Uhl.)

- Mississippi R. W. Harned (July 15): R. F. Colmer, Inspector for the State

Plant Board, reported the tomato suckfly on tomatoes at Pascagoula on June 26.

APPLE LEAFHOPPER (Empoasca mali LeB.)

- Maryland E. N. Cory (July 8): No damage apparent, except some hopperburn beginning with about 3 to 5 nymphs per leaf at Glenarm. Crop made so no damage need be expected.
- New York C. R. Crosby and assistants: This pest is found only in moderate numbers in Nassau County. In no instance has the infestation appeared serious.
- Indiana J. J. Davis (July 26): The potato leafhopper is an increasingly important problem in the northwestern quarter of the State. Reports of damage reached us from as far south as Danville.
- Illinois W. P. Flint (July 20): The potato leafhopper is much more abundant than usual in Illinois this season. Rather severe damage has occurred to garden beans as well as potatoes. It was also suspected of causing damage to red clover and soybeans.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

- Indiana J. J. Davis (July 26): The potato flea beetle continues as an outstanding potato pest.

CABBAGE

CABBAGE MAGGOT (Hylemyia brassicae Bouche)

- New York C. R. Crosby and assistants: In Erie County in untreated seed beds serious losses have resulted to cabbage and cauliflower. Many complaints have been received of injury in Monroe County to cabbage by this pest. Cabbage maggot injury is quite extensive both in early cabbage and late cabbage seed beds in Onondaga County. In some sections, farmers are having to buy all their late cabbage plants. Quite a few farmers treated their seed bed with corrosive sublimate this year and report their beds as being practically free from maggots.
- Maryland E. N. Cory (July 8): With black root rot and maggot injury combined, about one-third of the crop has been destroyed at Glenarm and a small percentage at Phoenix. The maggot is apparently on the increase as compared with its abundance in an average year.

CABBAGE APHID (Brevicoryne brassicae L.)

- Indiana J. J. Davis (July 26): Aphis brassicae reported attacking cabbage at La Fayette.
- Illinois C. C. Compton (July 8): The cabbage aphid is appearing in serious

numbers on late cabbage and cauliflower in Cook County. More injury is expected than was experienced in 1925. Moderate damage so far.

Nebraska M. H. Swenk (July 25): During the last week in June there were numerous complaints of injury to cabbage by the cabbage aphid.

CABBAGE WORM (Pontia rapae L.)

Utah G. F. Knowlton (July 30): Cabbage worms are doing slightly less damage in most parts of northern Utah, than last year.

DIAMOND-BACK MOTH (Plutella maculipennis Curtis)

Connecticut W. E. Britton (July 28): A cabbage head collected by A. E. Wilkinson shows injury and cocoons in Southington on this date.

STRAWBERRY

WHITE GRUBS (Phyllophaga spp.)

Kansas J. W. McColloch: The county agent reports white grubs destroying strawberry beds around Goodland.

STRAWBERRY LEAF ROLLER (Ancylis comptana Froehl.)

Ohio E. W. Mendenhall (July 15): I find that strawberry plants in Miami County are infested with the leaf roller to some extent.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

Maryland J. A. Hyslop (July 1): No damage has been noted and but very few beetles have been seen at Avanel. Its abundance as compared with an average year seems to be much less.

Indiana Bennet A. Porter (July 24): Crioceris asparagi has caused considerable damage in home gardens in this section (Vincennes).

BEANS

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

California Roy E. Campbell (July 1): Diabroticas were abundant all spring in the Santa Clara Valley, damaging particularly all varieties of string and wax beans grown here.

BEAN APHID (Aphis rumicis L.)

Nebraska M. H. Swenk (July 25): During the last week in June there were numerous complaints of injury to beans by the bean aphid.

Minnesota C. E. Mickel (July 15): Aphis rumicis is causing considerable damage to string beans grown for canning in one of the southern counties of the State. About 200 acres are affected.

SALT MARSH CATERPILLAR (Estigmene acrea Drury)

Mississippi R. W. Harned (July 15): Insects identified as probably the salt-marsh caterpillar were reported as injuring beans at Moss Point in Jackson County on June 26.

SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

New York C. R. Crosby and assistants: A great deal of damage has resulted on the early planted beans in Yates County. Three fields observed will be dragged up and many others are going to have a poor stand. In Wayne County a large number of bean plantings were seriously injured and many growers had to drag up the crop and replant.

New Mexico J. R. Douglass (June 30): The seed corn maggot has caused damage to bean plantings in the foothill region west of the Estancia Valley where the fields lay idle last season. Larvae, pupae, and adults can be found at this time.

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

North Carolina R. W. Leiby (July 16): It now appears that the bean beetle is more destructive in the upper Piedmont section of the State than in the mountain section. On July 19 it was reported in Caswell County, one county east of its known distribution for the season of 1925.

Indiana J. J. Davis (July 26): Numerous reports of the Mexican bean beetle have come from the southeastern part of the State. There is only one authentic record outside of the area known to have been infested in 1925. The new infestation is at Frankfort and considerably out of the previously known infested area.

SOUTHERN GREEN STINK BUG (Nezara viridula L.)

Florida F. S. Chamberlin (July 22): Young bugs are very numerous and are doing considerable damage in some of the bean fields in Gadsden County.

APPLE LEAFHOPPER (Empoasca mali LeB.)

North Carolina E. P. Metcalf (July): This insect has been very bad on cotton, potatoes, garden beans, soybeans, and peanuts, in the eastern two-thirds of the State.

Indiana J. J. Davis (July 26): The bean leafhopper, Empoasca sp., was reported damaging beans at Paoli on June 23.

PEAS

ZEBRA CATERPILLAR (Mamestra picta Harris)

Massachusetts A. I. Bourne (July 24): During the first week of July we received complaints of foliage riddling on peas by this caterpillar. In several parts of Hampshire County and one or two points in Franklin County rather extensive defoliation to peas was being caused by larvae of this species, which apparently were unusually abundant in certain small areas scattered through this region.

PEA APHID (Illinoia pisi Kalt.)

Maine E. M. Patch (July 17): Bad infestation in Hancock County, York, Cumberland, and Lincoln Counties, the damage being severe. (August 1): Portland Packing Company, Unity Plant, reports that they doubt very much if their yield will be in excess of 15 per cent of last year.

Massachusetts A. I. Bourne (July 24): Mr. Whitcomb, entomologist at our Station at Waltham, reported that the pea aphid in that section of Middlesex County and in certain sections of Plymouth County is abundant enough to be called serious.

New York Rodney Cecil (July 15): Damage ranges from a total loss on many fields to a reduced yield and poor quality of peas on others. The infestation extends approximately 20 miles south, west, and north of Utica.
There is a small area damaged in the vicinity of Cortland, Penn Yan, and Geneva, N. Y., though the area is not so large as that around Utica.

C. R. Crosby and assistants: Is very abundant this season in Orage County. This pest has materially reduced the crop on most truck farms.

Minnesota C. E. Mickel (July 15): The pea aphid has recently been reported as very abundant on peas grown for canning purposes in the southern part of the State.

Utah G. F. Knowlton (July 30): The pea aphid is not as numerous as usual, doing little damage to peas or alfalfa.

CUCUMBERS

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Connecticut W. E. Britton (July 24): This beetle was scarce early in the season, at Hamden, then became abundant, and many plants have died from wilt following larval burrows in the taproot. This form of injury is unusually noticeable.

- New York C. R. Crosby and assistants: This pest is present in about the usual numbers making it necessary to apply control measures generally. Attacking cucumbers and melons in Nassau County.
- Florida F. S. Chamberlin (July 13): This pest is now abundant in cantaloupe fields in Gadsden County.
- Indiana J. J. Davis (July 26): The striped melon beetle has been normally abundant at La Fayette.
- Illinois C. C. Compton (July 10): The striped cucumber beetle is not causing any damage to cucumbers, melons, and squash for the first time in a number of years in northern Illinois. In some fields it is difficult to find specimens.
- South Dakota H. C. Severin (June 8): Exceedingly scarce in South Dakota this year.
- Nebraska M. H. Swenk (July 25): Complaints of injury to cucurbits by the striped cucumber beetle continued to be received in normal numbers during the period covered by this report June 25-July 25.

MELONS

MELON APHID (Aphis gossypii Glov.)

- Indiana J. J. Davis (July 26): Aphis gossypii is reported as attacking melon at La Fayette.
- Nebraska M. H. Swenk (July 25): Complaints of injury to cucurbits by the melon aphid continued to be received in normal numbers during the period covered by this report, June 25 to July 25.
- California Roy E. Campbell (July 15): In Los Angeles and Stanislaus Counties this insect is reported attacking melons. Two fields in Los Angeles County have been observed to be practically wiped out by severe attacks, but in general the infestations are spotted. Increase in abundance as compared with last month.

WESTERN STRIPED CUCUMBER BEETLE (Diabrotica trivittata Mann.)

- California Roy E. Campbell (July 15): Adults damaging foliage and fruits in San Fernando Valley. In several fields 50 per cent of the plants show wilting caused by feeding of the larvae on the roots. More abundant as compared with an average year.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

- Massachusetts A. I. Bourne (July 24): Eggs of squash bugs in the fields were observed for the first time June 28.

Mississippi R. W. Harned (July 15): On June 28 specimens of the common squash bug infesting squash plants were received from Copiah, Grenada, and Leflore Counties.

ONIONS

CARROT RUST FLY (Psila rosae Fab.)

New York C. R. Crosby and assistants: Every onion field examined in this locality (Williamson) was infested by this pest, considerable damage being done in some instances.

ONION MAGGOT (Hylemyia antiqua Meig.)

New York C. R. Crosby and assistants: Every onion field examined in this locality (Williamson) was infested by this pest, considerable damage being done in some instances. At Elba, seedlings, bulbs, and seed onions are all being attacked by this pest and considerable loss is being realized.

Indiana J. J. Davis (July 26): The onion maggot has been reported destructive at Knox and Kewanna, in addition to the regions reported in the last bulletin.

Michigan R. H. Pettit (July 2): Onion maggots are the worst we have ever seen them in East Lansing; in fact, this seems to be the year for maggots of all kinds.

LESSER BULB FLY (Eumerus strigatus Fallen)

New York E. P. Felt (July 29): The lunate onion fly was taken at Garden City and Westbury, L. I., in early July and is apparently rather generally established, since the flies in each locality were found after but a few minutes' search.

BEEETS

BEEET WEBWORM (Loxostege sticticalis L.)

Minnesota C. E. Mickel (July 15): Large numbers of the sugarbeet webworm have been reported from Redwood, Lyon, and Stevens Counties in this State. Apparently the first brood has done very little injury to sugar beets, having fed principally on Russian thistles and lamb's-quarters. The worms caused considerable alarm among the farmers, however, when they became about two-thirds grown and started to migrate in armies. In passing through cornfields they devoured the lower leaves of the corn plants and for a time the farmers feared that the corn crop was going to be taken by the worm. No serious damage was done, however.

New Mexico J. R. Douglass (June 30): There have been three outbreaks of the beet webworm in the Estancia Valley within the last ten days. This is the first season since 1923 that the worms have occurred

and migrated in great numbers. The worms migrate into the best fields from uncultivated land where Russian thistles are produced in great numbers.

HAWAIIAN BEET WEBWORM (Hymenia fascialis Cramer)

Alabama L. W. Brannon (July 2): This insect is seriously damaging beets on some truck farms in Birmingham.

FLEA BEETLES (Halticinae)

Utah G. F. Knowlton (July 30): The flea beetles were especially damaging to sugarbeets in Utah this spring, holding them back as they came out of the ground, and in many cases necessitating re-planting.

BEET ROOT APHID (Pemphigus betae Doane)

Utah G. F. Knowlton (July 30): Very little damage at Logan from the beet root aphid is noted this year.

SUGARBEET LEAFHOPPER (Eutettix tenellus Baker)

Utah G. F. Knowlton (July 30): The sugarbeet leafhopper is very abundant over the western half of the State, and doing considerable damage. Around Delta, Richfield, Tremonton, and other places many fields are either deserted or plowed up. A number of the sugar factories in the State will not run, and this outbreak, which is more severe than the one two years ago, will do several million dollars damage to the farmers and sugar companies.

SPINACH

SPINACH LEAF MINER (Pegomya hyoscyami Fanz.)

Connecticut R. B. Friend (July 31): Very little damage was reported this year at New Haven. Spinach at the station, usually heavily infested, shows no injury whatsoever. Very much less abundant as compared with an average year.

CARROT

PARSLEY STALK WEEVIL (Listronotus latiusculus Boh.)

New York C. R. Crosby and assistants: Some infested beds near Valley Stream in Nassau County will sustain considerable loss from this pest. On June 30 some larvae in rearing cages pupated.

SWEET POTATO

TORTOISE BEETLES

Mississippi R. W. Harned (July 15): Injury to sweet potatoes caused by tortoise beetles has been reported from many localities in all sections of the

State during the latter part of June and first of July. The striped tortoise beetle, Metritona bivittata Say, seems to be the most abundant species. Very serious injury by this species was caused to sweet potatoes at Vardaman in Calhoun County.

ARGUS TORTOISE BEETLE (Chelymorpha cassidea Fab.)

Maryland

E. N. Cory (July 14): Reported by county agent at Salisbury. Doing considerable damage on one farm.

S O U T H E R N F I E L D - C R O P I N S E C T S

COTTON

BOLL WEEVIL (Anthonomus grandis Boh.)

GENERAL
STATEMENT

Cooperative report on status of boll weevil (July 1): The figures on weevil emergence from hibernation tests issued in the preceding report may for all practical purposes be considered final. At Baton Rouge, La., a few weevils emerged from June 16 to 30 while at the other stations either no weevils or a very few emerged. The figures on emergence would not be changed enough to justify issuing the table.

Scattered reports of boll weevil infestations have been received from most of the States in the southern part of the cotton belt. The heaviest infestations have been reported from south-central Texas, southern and northeastern Louisiana, eastern Arkansas, and in several sections of Mississippi. The infestation is increasing in most sections where weevils are present.

(July 16): In Texas a general light weevil infestation was reported in the south-central part with little damage, except in local areas. In Oklahoma weevils were reported in a number of counties in the southeastern quarter and east-central parts of the State. In Arkansas weevil damage is generally light and confined to the Delta Counties. In Louisiana a general heavy infestation is reported throughout the southern part and in the northeastern part the infestation averages higher than 10 per cent on many plantations. Poisoning is general in both parts. In Mississippi scattered light infestations are reported in most sections of the State, with higher infestations in a few local areas. In Alabama a general infestation was reported in the southern part, a somewhat lighter infestation in the central part, and approximately none in the northern part. In Georgia a very light infestation was reported in the Coastal plain section and no weevils in the Piedmont section.

North
Carolina

R. W. Leiby (July 12): The first generation is now emerging according to J. A. Harris. (July 24): Infestation appears lighter than any year since 1923.

Mississippi

R. W. Harned (July 15): The boll weevil infestation of the State is more general at this time than it has been during the past two years. However, the average infestation is rather low, as reports from 111 infested farms in all sections of the State showed an

average infestation of 3 per cent on July 10. A few heavy infestations were reported and some farmers are already poisoning. The extreme northern part of the State is the only section where weevils have not been found. Weevils of the first generation will begin depositing eggs within a few days and a rapid rise in the infestations is expected.

Louisiana W. E. Hinds (July 28): Boll weevils are quite abundant in the southern part of the State and scattered generally in small numbers throughout the northern half. We expect them to reach injurious numbers by about August 10 in the major part of the State.

COTTON FLEA (Psallus seriatus Reut.)

GENERAL
STATEMENT

Cooperative report on cotton insects (July 1): Reports of damage by the cotton hopper have been received from practically all sections from Texas through South Carolina including Oklahoma. Damage is generally reported across this area almost to the northern limit of cotton. The damage varies from very light to complete loss of all fruit in many fields.

(July 16): In Texas severe damage has been caused by the cotton hopper throughout the cotton-growing area in the eastern part of the State. Damage has been reported as far west as Mitchell County. In Oklahoma hoppers have been reported in counties scattered throughout the eastern half of the State. In Arkansas more or less damage has been reported in all counties except a few in the west-central part. In Louisiana severe damage has occurred in the northern part and scattered reports come from the southern part. In Mississippi reports of hopper damage come from all sections, the heaviest damage being reported in the northern and eastern sections. In Alabama hoppers are general throughout the State with heaviest damage in the central and northern sections. In Tennessee hopper damage was reported in a number of counties in the western part. In Georgia hopper damage is severe throughout the Piedmont section. Hoppers are present throughout the remaining part of the State with severe damage in local areas only. In South Carolina hoppers have caused severe damage in the Piedmont section. In North Carolina there is a general but light infestation with a few cases of severe damage in the Piedmont section.

North Carolina R. W. Leiby (July 22): Found now generally widespread over the cotton section of the State. Seriously destructive in Gaston and Lincoln Counties where some dusting with sulphur is being done in an effort to control it.

South Carolina J. O. Pepper (June -July): Many fields of cotton have been seriously damaged by this insect in the Piedmont section.

Georgia Oliver I. Snapp (July 21): The cotton hopper attacks have subsided at Fort Valley, and after the recent hot days and nights cotton is now fruiting nicely.

Mississippi R. W. Harned (July 15): Specimens of the cotton hopper and complaints of its injury to cotton continue to pour into this office. The hopper is apparently present in injurious numbers in nearly every county in the northern half of the State, while

complaints have also been received from several counties in the southern part of the State. The injury seems to be heaviest in the north-central counties. In many fields very few large squares are to be found, while a close examination will reveal that practically all the small ones have been blasted. A few farmers have dusted with sulphur, but most of them are not applying control measures, relying on the hope that the hoppers will soon migrate from the fields.

Louisiana W. E. Hinds (July 28): The cotton flea hopper has been reported in more or less injurious abundance in some 25 parishes in the northern part of the State with occasional occurrence in other sections. Damage to the bottom crop exceeds 75 per cent in many heavily infested fields, but such injury is rather spotted.

COTTON WORM (Alabama argillacea Hbn.)

GENERAL
STATEMENT

Cooperative report on cotton insects (July 1): The leaf worm has been multiplying and spreading from several counties in south-central Texas during the last few weeks. In this locality considerable poisoning has been done. The insect has made its appearance in several Parishes in southwestern Louisiana and southwestern, central, and northeastern Arkansas and northern Mississippi.

(July 16): Leaf worms have been multiplying and spreading from a number of counties in south-central Texas and are now as far north as Williamson County in Texas. In Louisiana they have been reported in several Parishes in the southwestern part of the State. In Arkansas they have been reported in the southwestern, central, and northeastern parts of the State. In Mississippi they are reported in one county in the extreme part.

Mississippi R. W. Harned (July 15): The first specimens of the cotton leaf worm received this year were collected by T. F. McGehee, Inspector for the State Plant Board, at Holly Springs in the extreme northern part of the State on July 6. This is four weeks earlier than the worms appeared last year, and as cotton is two to three weeks later than in 1925, and is further delayed in fruiting because of injury by the cotton hopper, it is possible that heavy loss will be inflicted if the worms become generally distributed.

Louisiana W. E. Hinds (July 28): The cotton leaf worm has been definitely reported from the southwestern and northwestern corners with occasional occurrence reported in intermediate areas. We expect defoliation to become common late in August. This is a serious prospect, as the crop is generally considered about two weeks later than normal.

BOLL WORM (Heliothis obsoleta Fab.)

Georgia R. P. Bledsce (July 1): The boll worm seems to be unusually numerous in some sections of southern Georgia. In one field at Experiment this insect had injured from 5 to 50 per cent of the squares.

- Alabama J. M. Robinson (July 16): The cotton boll worm is appearing rather generally over the entire State. In some locations at Auburn the infestation is running as high as 10 per cent.
- North Carolina R. W. Leiby (July 24): Larvae have been rather frequently reported as injuring squares in sections where an earlier generation developed on vetch in armyworm proportions. Some calcium arsenate dusting has been done to control this insect on cotton.
- South Carolina J. O. Pepper (July 8): The larvae have migrated from alfalfa fields to near-by cotton fields and have completely destroyed many acres of the young cotton in Oconee County.
- Mississippi R. W. Harned (June 15): Insects belonging to the genus Heliothis, probably Heliothis obsoleta, were received on July 13 from Amory in Monroe County. Cotton was being injured by these insects.

COTTON APHID (Aphis gossypii Glov.)

- North Carolina R. W. Leiby (June 30): Many complaints of injury caused by the cotton louse have been received. However, parasites and lady beetles are effectively controlling the lice now at Raleigh.
- Louisiana W. E. Hinds (July 28): Cotton plant lice are developing in numbers sufficient to call for control measures in many locations where poisoning for weevils is being done. In some cases nicotine sulphate applications have already been made for the lice in accordance with the Louisiana method worked out in 1925, which consists of one-half pound of nicotine sulphate thoroughly absorbed in 8 pounds of hydrated calcium arsenate per acre, and applied in the late evening or when the air is as still as possible.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

- Louisiana T. E. Holloway (July 7): Grassworms have been found on cotton near New Orleans.
- W. E. Hinds (July 8): The grass worm is now showing up in large numbers around Baton Rouge and reports have been received from points below Baton Rouge. They are expected to appear practically throughout the State at about this time. (July 28): The grass worm occurs in the third generation. It was quite widely distributed through Louisiana but not seriously injurious as crops had increased so much in size that the worms did correspondingly less damage. Parasitism also increased notably in the third generation.
- Mississippi R. W. Harned (June 15): Injury to cotton by the southern grassworm or fall armyworm has been reported from Lake in Scott County, Lucedale in George County, and Meridian in Lauderdale County. In each case specimens were sent to this office for identification. Specimens of the southern grassworm on corn were received from Lake in Scott County.

TARNISHED PLANT BUG (Lygus pratensis L.)

- Mississippi R. W. Harned (July 15): It is apparent that a part of the injury

to cotton this summer which has been attributed to the cotton hopper, has been caused by the tarnished plant bug. Specimens of this pest with complaints of serious injury to cotton have been received from 11 counties, all in the northern half of the State.

Louisiana W. E. Hinds (July 28): The tarnished plant bug has been unusually abundant on cotton, sucking half grown squares particularly and adding decidedly to flea-hopper damage and apparently also to the spread of anthracnose or boll rot in the cotton.

COTTON PLANT BUG (Adelphocoris rapidus Say)

Louisiana W. E. Hinds (July 28): The rapid plant bug has been unusually abundant on cotton, sucking half-grown squares particularly and adding decidedly to flea-hopper damage and apparently also to the spread of anthracnose or boll rot in the cotton.

LEAFHOPPERS (Graphocephala versuta Say and
Empoasca mali LeB.)

North Carolina R. W. Leiby (July 9): An injury similar to that caused by the cotton hopper is being rather generally inflicted upon cotton in Wayne, Scotland, and Halifax Counties, the injury being caused by Diedrocephala versuta and apple leafhoppers.

Z. P. Metcalf (July 8): In the upper Piedmont section of the State the cotton in many fields was found to be badly damaged by leafhoppers, with practically no cotton hoppers, a few thrips, and not sufficient cotton lice to amount to anything. The chief indication of damage was in the curled and twisted condition of the leaves and in the stunted growth of the plants. Plants badly damaged form no lateral branches. This condition was also described in Edgecombe County by the county agent in a field where cotton had been planted between rows of Irish potatoes; the potatoes were killed by hopperburn and the leafhoppers then transferred their attention to the cotton. There are some indications that the plants will recover in part from this attack.

THRIPS (Thysanoptera)

South Carolina C. O. Eddy (July 2): During June much cotton in the western part of the State was dwarfed and in addition the leaves had a very ragged appearance, at Clemson College. This was not associated with a heavy aphid infestation. During the first part of the month many fields were infested with a large number of thrips, but they have disappeared now. Plants are also recovering from the injury.

RED SPIDER (Tetranychus telarius L.)

Texas F. L. Thomas (July 2): One of the few fields in which blooms have been observed had a good many red spiders in the cotton at College Station. This is worthy of note because it is the

first time I have seen red-spider injury in a cotton field in this State.

CORN SILK BEETLE (probably Luperodes varicornis Lec.)

Mississippi R. W. Harned (July 15): During the last two weeks complaints regarding injury to cotton by insects belonging to the genus Luperodes have been received from Adams, Alcon, Covington, Franklin, Jasper, and Lauderdale Counties. In each case the complaint was accompanied by specimens.

COTTON SQUARE BORER (Uranotes melinus Hbn.)

Texas F. C. Bishopp (July 15): Cotton square borers are present in moderate numbers in cotton in this vicinity (Dallas) and are causing noticeable injury to squares, which are none too numerous on the plants at this time on account of the activities of the cotton hopper.

TOBACCO

SOUTHERN GREEN STINK BUG (Nezara viridula L.)

Florida F. S. Chamberlin (June 29): Shade tobacco is being slightly damaged by the southern green plant bug in a few instances in Gadsden County. The infestation appears to be less than usual this season.

TOBACCO WORMS (Protoparce quinquemaculata Haw.)

Indiana J. J. Davis (July 26): Tobacco worms are abundant at Milltown on July 23.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana W. E. Hinds (July 28): The second generation of the sugarcane borer was just reaching maturity during the last week of July. The first and second generations have developed principally in corn. We expect transfer to cane in increasing abundance during August, but believe that the prospect is not as serious as was our experience of 1925 when 30 per cent of the total sugar crop of the State was destroyed. No parasitized cane borer eggs have been found thus far this season but Trichogramma minutum Riley has been found breeding abundantly in the eggs of the corn ear worm and tomato sphinx particularly. In the large eggs of the latter species more than three-fourths of them showed parasitization with an average of over 20 parasites produced per egg. We expect these parasites to transfer their attention to cane-borer eggs on cane during August.

F O R E S T A N D S H A D E - T R E E I N S E C T S

MISCELLANEOUS FEEDERS

SATIN MOTH (Stilpnotia salicis L.)

Massachusetts A. I. Bourne (July 24): Reports have come in around the last of

June, from points in Worcester County, particularly the southern half, that the satin moth was very abundant in that section and doing considerable damage. At that time the larvae were practically mature and most of the injury had been completed.

Rhode Island R. A. Sheals (July 31): Stripping individual trees, not generally serious at Pawtucket and Providence. First records for these places though known to be in the State in 1925.

Washington R. L. Webster (July 6): Defoliated Lombardy poplars on campus of University of Washington, Seattle, in June.

GIPSY MOTH (Porthetria dispar L.)

Massachusetts A. I. Bourne (July 24): Mr. Lacroix reports that the gipsy moth is causing serious defoliation in wood districts from Falmouth through to Brewster and there apparently is a heavy infestation in Sandwich and Barnstable, and doubtless neighboring towns.

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma S. & A.)

Massachusetts J. V. Schaffner, Jr. (July 7): At Everett there is a local outbreak of this species on various shade trees. Feeding heavy on linden, horse-chestnut, elm, and sycamore maple on July 7.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Indiana J. J. Davis (July 26): Bagworms have been reported from several places in southern Indiana. We found recently hatched young (possibly a few days old) at Terre Haute, on June 30.

Kansas J. W. McColloch (July 10): Bagworm injury has been reported from Tecumseh, Manhattan, and Burlingame. (July 31): The bagworm continues to increase in numbers in the State. Evergreens, boxelder, and maple trees are entirely defoliated in many sections of eastern Kansas. The following communities have reported injury since July 17: Burlingame, Manhattan, Cherryvale, Olpe, North Topeka, Kansas City, Ks., Topeka, Everett, and Oswego.

ARBORVITAE

RED SPIDER (Tetranychus telarius L.)

Ohio E. W. Mendenhall (July 24): I find the red spider quite bad on arborvitae evergreens in nurseries at Springfield and Dayton.

BIRCH

BIRCH LEAF MINER (Fenusa pumila Klug)

Massachusetts A. I. Bourne (July 24): By July 1 the work of the birch leaf miner

was becoming very conspicuous. Reports have come into the office from many points, particularly in the western half of the State.

LARCH

HEMLOCK SPANWORM (Ellopia fiscellaria Guen.)

Michigan

R. H. Pettit (July 17): I received today from one of our field men from the Grand Traverse district a quantity of half-inch larvae of Ellopia fiscellaria. This creature is coming out on schedule in the district where it defoliated trees last year, and it will be of interest to you to note that up here in Michigan it passes the winter in the egg stage and only develops one generation, whereas in Ohio, according to Prof. J. S. Houser, there are two generations and they hibernate in the pupa stage.

LOCUST

LOCUST LEAF MINER (Chalepus dorsalis Thunb.)

Maryland

Perez Simmons (July 30): More abundant than for the past three years in Montgomery, Prince George and St. Mary's Counties. Adults emerged about July 26.

MAPLE

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Indiana

J. J. Davis (July 26): The cottony maple scale has been the outstanding shade-tree pest. Reports the past month have come from Montmorenci, Indianapolis, Monticello, Alexandria, Farmland, Elchland, Goodland, Kokomo, Elwood, Delphi, Mellott, Danville, Hartford City, Lebanon, Marion, Knox, and Gas City.

WOOLLY ALDER APHID (Prociphilus tessellatus Fitch)

New York

E. P. Felt (July 29): The alder blight aphid was extremely abundant upon soft maples at Altamont, Albany County, the walk beneath the trees being well moistened with honeydew.

PINE

SOUTHERN PINE SAWYER (Monochamus titillator Fab.)

Nebraska

M. H. Swenk (July 25): A complaint was received from Scotts-bluff County of pine logs being attacked and destroyed in a few years, even when used for building log cabins, by the pine sawyer.

PINE BARK LOUSE (Chermes pinicorticis Fitch)

North
Carolina

R. W. Leiby (July 24): The white pine bark louse has been complained of more than usual. Reports indicate a gradually heavier

infestation during the last three years. The writer has recently seen white pine groves in the western part of the State that appeared as if the trees had been thoroughly white-washed.

SAWFLIES

Florida

J. R. Watson (July 30): Considerable damage to the needles of pine trees from sawflies has been reported during the month.

SPRUCE

LONG SPRUCE CONE GALL (Chermes cooleyi Gillette)

New York

E. P. Felt (July 29): The sistens form of the colonica generation were received in early June from E. E. Horsey, the needles of the infested Douglas spruce being well spotted with woolly masses suggestive of infestation by the woolly larch aphid. The specimens were determined through the courtesy of the Federal Bureau of Entomology by Dr. J. W. Muir of the Imperial Forestry Institute, Oxford University.

WALNUT

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Indiana

J. J. Davis (July 26): Walnut worms seem to be normally abundant in central Indiana.

WILLOW

EUROPEAN WILLOW BEETLE (Flagioidera versicolora Laich.)

New York

E. P. Felt (July 29): The imported willow leaf beetle has recently been received from Amenia, Dutchess County, this being a considerable northern extension of the area known to be infested by this insect.

A SCALE (Aspidiotus popularum Marlatt)

Michigan

R. H. Pettit (July 9): Two willow trees were killed and a number injured at Frankford by Aspidiotus popularum, a scale that is not very plentiful in this part of the country. The trees were 15 feet high and apparently otherwise in a vigorous condition.

A FLEA WEEVIL (Orchestes rufipes Lec.)

Maine

C. R. Phipps (July 19): The adult weevils were feeding in vast numbers in June on the leaves of willow hedges on several estates at Kennebunk Beach.

INSECT-SMART-TRACKING GREENHOUSE

ADDITIONAL INFORMATION ON ORNAMENTAL PLANTS

MISCELLANEOUS FEEDERS.

AZALEA LEAF ROLLER (Gracilaria zachrysa Meyr.)

Maryland E. N. Cory (July 8): Rather sparse infestation in propagating houses and a heavy infestation in cold frames containing stock plants of azaleas at Baltimore.

BLISTER BEETLES (Meloidae)

Ohio E. W. Mendenhall (July 26): I find the blister beetles doing some damage to Clematis paniculata in the southwestern part of the State. Spraying with arsenate of lead was effective. (July 19): The gray blister beetle, Macrobasis unicolor Kirby, is very destructive to Clematis paniculata at Columbus. The arsenate of lead is valuable.

A PYRALID MOTH (Herculia planalis Grt.)

Texas O. G. Babcock (June 23): The bushes of Algerita are badly infested with the above moth. The larvae are webbing and eating away all the leaves near by. These bushes are native, the berries being gathered by the population and made into excellent jelly. The moths appeared in cages on May 11, 19, 22, 24, and 26. The larvae are now two-thirds grown. The infestation was severe last year and appears to be more severe this year.

GRAPE-LEAFHOPPER (Erythroneura comes Say)

Nebraska M. H. Swenk (July 25): From Franklin, Furnas, and Lincoln Counties there were received during the first two weeks in July several reports of severe injury to woodbine vines about houses by the grape leafhopper, Erythroneura comes Say.

ASTER

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

Ohio E. W. Mendenhall (July 26): I found the woolly aphid on the roots of the aster plants in gardens in Springfield. Nicotine sulphate is most effective.

CHRYSANTHEMUM

LACE BUGS (Tingidae)

South Carolina J. O. Pepper (June 27): These insects were severely injuring chrysanthemum plants in a yard near Easley.

GLADIOLI

A MITE (probably Rhizoglyphus hyacinthi Boisd.)

Indiana J. J. Davis (July 26): A mite, probably Rhizoglyphus hyacinthi, was destructive to gladioli at Columbia on July 12.

SUNFLOWER

SUNFLOWER CATERPILLAR (Suleima helianthana Riley)

Missouri L. Haseman (July 23): During the first half of July sunflower growers of southeastern Missouri had their crops seriously injured by a small caterpillar which bored into the stalks and growing tip of the young plants. This caterpillar was identified by Mr. Carl Heinrich of the Bureau as Suleima helianthana Riley. The moths emerged about the 10th and the 15th of July.

VERBENA LEAF MINER (Agromyza jucunda VanderWulp)

Indiana J. J. Davis (July 26): The verbena leaf miner has been abundant in central Indiana in the latter half of July.

I N S E C T S A T T A C K I N G M A N A N D

D O M E S T I C A N I M A L S

MAN

FLIES (Several species)

Texas E. W. Laake (July 24): Weekly trapping records at a local packing house at Dallas show that there has been a decided decrease in the number of flies captured during July as compared with June. While the weekly catch per trap during June ran about 2 gallons, it decreased in July to about 2 quarts. There was a proportionate decrease in the number of screw worm flies, Cochliomyia macellaria Fab., taken. During July trapping Lucilia spp. constituted only about 2 per cent of the total catch. This is distinctly lower than the percentage taken in June.

SCORPIONS

Texas F. C. Bishopp (July 24): Numerous house invasions by scorpions at Dallas have been reported during July.

CAT AND DOG FLEAS (Ctenocephalus canis Bouche' and
C. felis Bouche')

Texas F. C. Bishopp (July 24): House and yard invasions by the cat flea and the dog flea have continued throughout July at Dallas. The trouble from these fleas is apparently being extended farther

into the summer season than normal on account of the unusual amount of rain. Reports of household and yard infestations by these fleas have been received from Missouri, Indiana, Pennsylvania, Kentucky, Georgia, and South Carolina.

PUSS CATERPILLAR (Megalopyge opercularis S. & A.)

Texas F. C. Bishopp (July 24): One-half grown to mature larvae of this species have been found on shade trees in this city (Dallas). No reports have come in on the stinging of people by these caterpillars this season.

YELLOW-FEVER MOSQUITO (Aedes aegypti L.)

Texas F. C. Bishopp (July 24): This insect was first noted in Dallas about July 10. It increased some and became more annoying in dwellings toward the end of the month.

Maryland E. N. Cory (June 30): Reported as infesting the "It Shoe Polish Company Plant." This is the second report from Baltimore, the first recorded in Journal by Sanders.

A MITE (Tyroglyphus sp.)

Maryland J. P. Brown (June 30): Sulphur fumigation recommended at Salisbury.

CATTLE

CANYON HORSE FLY (Tabanus rubescens Bellardi)

Texas D. C. Parman (July 24): This horse fly was reported to be fairly abundant in the canyons north of Uvalde during early July, but there was a rapid diminution in the number toward the end of the month. In the region between Junction and Menard the flies appear to have been more abundant than elsewhere in the Southwest. The number of flies per animal in that section during the latter part of June ranged from 10 to 40. The outbreak of anthrax which occurred in Uvalde and adjacent counties was brought under control during July with comparatively light losses. There was some indication that the canyon horse fly played a part in the dissemination of the disease.

NOSE FLY (Gastrophilus haemorrhoidalis L.)

Nebraska M. H. Swenk (July 25): The nose bot fly was complained of as being exceedingly annoying to horses in York County during the first week in July.

BLOOD SUCKING FLIES (Several species)

Missouri L. Haseman (July 23): Blood sucking flies of livestock have been reported during the month. Missouri farmers have given special attention to these flies and used spray mixtures for controlling

them. Inquiries have been received from all parts of the State.

HORN FLY (Haematobia irritans L.)

- Missouri L. Haseman (July 23): In central Missouri the horn fly has been particularly abundant and annoying to cattle.
- Texas F. C. Bishopp (July 24): Observations made in several parts of eastern and southern Texas during July indicate that the horn fly is not sufficiently numerous to cause severe annoyance to dairy and range cattle. It is generally assumed that excessive horn fly abundance is usually associated with rainy weather. The condition this year, however, does not bear out this assumption.
- O. G. Babcock (June 28): 300 to 500 per animal. Have held their own for some time past at Sonora. Still remain mainly upon the sides, shoulders, and beneath the tail. Practically 90 to 95 per cent of the cattle have horn fly sores.

SCREW WORM (Cochliomyia macellaria Fab.)

- Texas F. C. Bishopp (July 24): Reports received during July from various parts of Texas indicate that the screw worm losses this year are about normal. Some localities in extreme southern Texas seem to have had an unusual number of screw worm cases and the losses have been rather heavy on sheep and goat ranches in the Divide Country.

STABLE FLY (Stomoxys calcitrans L.)

- Missouri L. Haseman (July 23): In central Missouri the stable fly has been particularly abundant and annoying to cattle.

POULTRY

GRAY-COLORED BILLBUG (Sphenophorus aequalis Gyll.)

- South Dakota H. C. Severin (June 6): These beetles are abundant in certain sections of South Dakota and have been repeatedly sent in by farmers with the complaint that they have killed many chicks. The beetles may become attached to the roof of the mouth or to the outside of the head, neck, etc.

I N S E C T S I N F E S T I N G H O U S E S A N D

P R E M I S E S

POWDER POST BEETLES (Ixctus spp.)

- Indiana J. J. Davis (July 26): Another report of damage to barn timbers by the powder post beetles has come in, this report being from Shelbyville on July 3.

FLEAS (Siphonaptera)

Indiana J. J. Davis (July 26): Fleas have been normally abundant throughout the State.

TERMITES

Indiana J. J. Davis (July 26): A few reports of white ants, Reticulitermes sp., continue to come in from the southern half of the State.

Kansas J. W. McColloch (June 21): Termites are working on cherry and plum trees and on various ornamentals in a yard at Gen. (July 31): Reports of termites killing cherry trees have been received from Plainville, July 10. Lenora on July 16, and Norton on July 20.

SUMMARY T. E. Snyder (July 2): Summary of termite damage to buildings, mainly by subterranean species of Reticulitermes, from July 1, 1925, to July 1, 1926, in the United States.

<u>STATE</u>	<u>NUMBER OF CASES</u>	<u>STATE</u>	<u>NUMBER OF CASES</u>
Alabama	1	Indiana	9
Arizona	2	Iowa	81
Arkansas	5	Kansas	42
California	17	Kentucky	5
Canal Zone, Panama	3	Louisiana	24
Connecticut	1	Maryland	13
Florida	3	Massachusetts	3
District of Columbia	58	Michigan	1
Georgia	2	Mississippi	3
Hawaii	4	Missouri	19
Idaho	1	Nebraska	6
Illinois	14	New Jersey	2

<u>STATE</u>	<u>NUMBER OF CASES</u>
New York	7
North Carolina	5
Ohio	36
Oklahoma	14
Pennsylvania	7
Philippines	1
South Carolina	2
Tennessee	4
Texas	47
Virginia	13
Virgin Islands	1
West Virginia	3

RICE WEEVIL (Calandra oryzae L.)

Texas F. C. Bishopp (July 24): During the early part of July an outbreak of the rice weevil was reported in a local macaroni factory. The infestation caused some losses at Dallas, but the main supply of

flour and packed goods was not invaded before the insect was brought under control by superheating.

A NONSUBTERRANEAN TERMITE (Cryptotermes brevis Walker)

Louisiana

T. E. Snyder (July 2): The discovery of Cryptotermes brevis Walker, a West Indian termite, in the woodwork of a building at New Orleans. Previously this termite, which is one of the powder-post termites not attacking wood from the ground, had been found only in southern Florida where it has been especially injurious to buildings.

Work on the two model demonstration termite-proof buildings on Barro Colorado Island, Canal Zone, Panama, and at New Orleans is being pushed and they should be finished during the present calendar year. These buildings demonstrate that termites can be kept out of wooden buildings by the use of concrete foundations or wooden foundations impregnated with coal-tar creosote, the interior woodwork and furniture being treated with chemicals to prevent attack by nonsubterranean powder-post termites, which latter forms occur in the southern part of the United States and throughout the Tropics.

LARDER BEETLE (Dermestes lardarius L.)

Nebraska

M. H. Swenk (July 25): In middle of July a correspondent in Hamilton County sent in numerous larvae of the larder beetle with a statement that they were found imbedded in the wood of the sills and other woodwork of his house where he said they were weakening those structures.